

Geometry

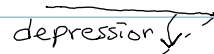
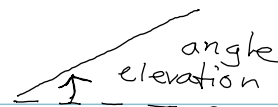
Trigonometry

$$\sin = \frac{\text{opp}}{\text{hyp}}$$

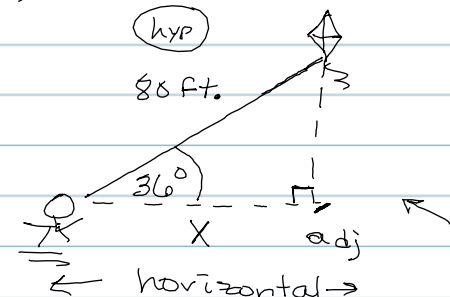
$$\tan = \frac{\text{opp}}{\text{adj}}$$

$$\cos = \frac{\text{adj}}{\text{hyp}}$$

Ls. 73 Angle of Elevation and Depression



Ex. 1 Use the angle of elevation between the kite and the child to find the horizontal distance between the kite and the child.

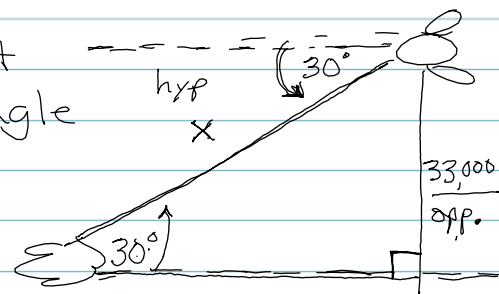


$$\cos 36^\circ = \frac{X}{80}$$

$$64.7 = X \quad \checkmark$$

ft

Ex. 2 The pilot in a plane cruising at 33,000 ft sees a lake. If the angle of ~~the~~ depression from the plane to the lake is  $30^\circ$ , how far is the plane from the lake?



$$\sin 30 = \frac{33,000}{X}$$

$$\frac{X \cdot \sin 30}{\sin 30} = \frac{33,000}{\sin 30}$$

$$X = 66,000 \text{ ft (hyp)} \quad \checkmark$$